

REMARKS

Claims 10 to 29 are pending in the present application.

Applicants respectfully request the reconsideration of the above-captioned application in view of the following remarks.

With respect to paragraph two (2) of the Final Office Action, claims 10 to 29 stand rejected under 35 U.S.C. § 112, first paragraph, as lacking enablement.

As regards claim 10, it provides that the first measuring electrode includes a cermet electrode with at least one metal oxide component, the at least one metal oxide component being capable of reversible incorporation of oxygen, and further provides that the cermet includes a metallic component and a ceramic component. It is respectfully submitted that the Office Action conclusorily asserts that "one processing ordinary skill in the art could not reasonably construct the claimed and described sensor without undue experimentation." (See Final Office Action, page 3).

As described in the specification, at least the "first measuring electrode is a cermet electrode, where at least one metal oxide component of the cermet electrode is capable of reversible incorporation of oxygen, the potential of this first measuring electrode is kept almost constant in the range around $\lambda \approx 1$." (See Specification, page 4, lines 29 to 31). Also, the specification specifically states that "[s]uitable metal oxide components for the first measuring electrode include, for example, the mixed oxides such as TiNiNbO_x or FeNiMnO_4 " and that "a noble metal such as gold may also be incorporated into the first measuring electrode." (See Specification, page 5, lines 9 to 12). Furthermore, the specification specifically states that "a mixed potential electrode 14 may be made mostly of TiNiNbO_x or FeNiMnO_4 ", that "metal oxides such as Mn_2O_3 and CeO_2 " may also be used, and that "the cermet electrode may also contain as an added metal component a noble metal such as gold or silver." (Specification, page 8, lines 7 to 11).

Accordingly, it is respectfully submitted that the specification is enabling as to each of the claims for these reasons alone.

As regards claim 11 to 29, these claims depend from claim 10 and are therefore allowable for the same reasons as claim 10.

As further regards claim 20, it provides that "the first measuring electrode is

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substantially composed of mixed oxides with a composition of one of TiNiNbO_x and FeNiMnO_4 ". In particular, claim 20 depends from claim 12 which provides that "the metal oxide component is at least one of CeO_2 and Mn_2O_3 ." As specifically described in the specification, a "mixed potential electrode 14 may be made mostly of TiNiNbO_x or FeNiMnO_4 " and metal oxides such as Mn_2O_3 and CeO_2 " may also be used (see Specification, page 8, lines 7 to 11), so claim 20 is enabled. It is therefore respectfully submitted that the disclosure is enabling.

Thus, claim 10 includes a first measuring electrode includes a cermet, which includes a metallic and a ceramic proportion, and a first measuring electrode that has a metal oxide. From this, the Office Action asserts that the electrode includes a metal, a ceramic and a metal oxide, and that these three components are different. It is, however, known to one skilled in the art that metal oxides are, as a rule, ceramic (for example, aluminum oxide). In particular, the metal oxides mentioned in the specification, TiNiNbO_x , FeNiMnO_4 , Mn_2O_3 and CeO_2 are ceramic metal oxides, which form the ceramic proportion of the cermet. As to the first measuring electrode including a metallic proportion, in the present application, gold and silver are given as examples for the metallic proportion, so that gold or silver form the metallic proportion of the cermet electrode.

Accordingly, the claims are enabled for these reasons alone.

As further regards the enablement requirement under the first paragraph of 35 U.S.C. § 112, it is respectfully submitted that the standard for determining whether a patent application complies with the enablement requirement is that the specification describe how to make and use the invention -- which is defined by the claims. (See M.P.E.P. § 2164). The Supreme Court established the appropriate standard as being whether any experimentation for practicing the invention was undue or unreasonable. (See M.P.E.P. § 2164.01 (citing Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916); In re Wands, 858 F.2d 731, 737, 8 U.S.P.Q.2d 1400, 1404 (Fed Cir. 1988))). Thus, the enablement test is "whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." (See id. (citing United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 U.S.P.Q.2d 1217, 1223 (Fed. Cir. 1988))).

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The Federal Circuit has made clear that there are many factors to be considered in determining whether a specification satisfies the enablement requirement, and that these factors include but are not limited to the following: the breadth of the claims; the nature of the invention; the state of the prior art; the level of ordinary skill; the level of predictability in the art; the amount of direction provided by the inventor; the existence of working examples; and the quantity of experimentation needed to make or use the invention based on the disclosure. (See id. (citing In re Wands, 858 F.2d at 737, 8 U.S.P.Q.2d at 1404 and 1407)). In this regard, the Federal Circuit has also stated that it is “improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors,” and that the examiner’s analysis must therefore “consider all the evidence related to each of these factors” so that any nonenablement conclusion “must be based on the evidence as a whole.” (See M.P.E.P. § 2164.01). It is respectfully submitted that the Office Action has not addressed these factors.

Importantly, an examiner bears the initial burden of establishing why the “scope of protection provided by a claim is not adequately enabled by the disclosure.” (See id. (citing In re Wright, 999 F.2d 1557, 1562, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993))). Accordingly, a specification that teaches the manner and process of making and using an invention in terms that correspond in scope to those used in describing and defining the claimed subject matter complies with the enablement requirement. (See id.).

It is believed that the Final Office Action does not meaningfully address -- as they must under the law -- whether the present application enables a person having ordinary skill in the art to practice the claimed subject matter of the claims without undue experimentation - - which it plainly does. In short, it is believed that the Final Office Action does not really address the issue of whether one having ordinary skill would have to *unduly experiment* to practice the claimed subject matter of the rejected claims -- a proposition for which the Office bears the burden of proving a prima facie case as to the rejected claims.

In this regard, to properly establish enablement or non-enablement, the Office must make use of proper evidence, sound scientific reasoning and the established law. In the case of Ex Parte Reese, 40 U.S.P.Q.2d 1221 (Bd. Pat. App. & Int. 1996), a patent examiner rejected (under the first paragraph of section 112) application claims because they were based on an assertedly non-enabling disclosure, and was promptly reversed because the rejection

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was based only on the examiner's subjective belief that the specification was not enabling as to the claims. In particular, the subjective assertions of the Office Action are simply not supported by any real "evidence or sound scientific reasoning" -- which the law requires and which makes plain that the Office (and not an applicant) bears the burden of persuasion on an enablement rejection.

More particularly, the examiner in Ex parte Reese was reversed because the rejection had only been based on a conclusory statement that the specification did not contain a sufficiently explicit disclosure to enable a person to practice the claimed invention without exercising undue experimentation -- which the Board found to be merely a conclusory statement that only reflected the subjective and unsupported beliefs of a particular examiner and that was not supported by any proper evidence, facts or scientific reasoning. (See id.). Moreover, the Board made clear that it is "incumbent upon the Patent Office . . . to back up assertions of its own with acceptable evidence," and also made clear that "[where an] examiner's 'Response to Argument' is not supported by evidence, facts or sound scientific reasoning, [then an] examiner has not established a *prima facie* case of lack of enablement under 35 U.S.C. § 112, first paragraph." (See id. at 1222 & 1223; italics in original).

In the present case, it is respectfully submitted that the Final Office Action has not satisfied the foregoing for establishing that undue experimentation would be required in view of the explanations provided herein, and it is therefore respectfully requested that the present rejections be withdrawn.

In view of at least the foregoing, it is respectfully submitted that claims 10 to 29 satisfy the enabling requirement of the first paragraph of 35 U.S.C. § 112.

With respect to paragraph five (5), claims 20 to 22, 26 and 28 were rejected under the first paragraph of 35 U.S.C. § 112 as to the written description requirement.

Claims 20 to 22, 26 and 28 are allowable essentially for the reasons provided as to the enablement rejections. Still further, to the extent that the objections concern the written description requirement, the Office bears the initial burden of presenting "evidence or reasons why persons skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims." (See M.P.E.P. § 2163.04 (citing In re Wertheim 541 F.2d 257, 262, 265, 191 U.S.P.Q. 90, 96, 98 (C.C.P.A. 1976))) (emphasis added). It is

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therefore respectfully requested that the objection be withdrawn since the initial burden has not been addressed, especially in view of the explanations provided herein as to the enablement and written description requirements.

Accordingly, claims 10 to 29 are allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that claims 10 to 29 are allowable, and it is therefore respectfully requested that the rejections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

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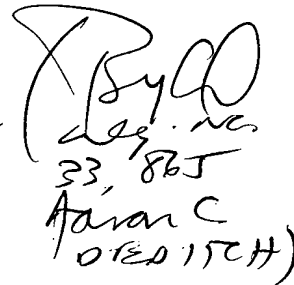
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